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**METHOD AND APPARATUS FOR POSITIONING A  
TOOL RELATIVE TO A WORKPIECE**

**ABSTRACT OF THE DISCLOSURE**

5       An apparatus for positioning a tool relative to a workpiece, including  
a first carrier rotatable on a first axis and a second carrier carried by the first carrier  
and rotatable about a second axis defined by the first carrier. The second axis is  
in a parallel and offset eccentric relationship to the first axis. A tool holder is  
secured to the second carrier in an offset eccentric relationship to the second axis,  
and a drive mechanism selectively rotatably drives the first carrier about the first  
10   axis and the second carrier about the second axis to selectively position the tool  
holder. A tool secured in the tool holder may be moved along a selected path  
relative to a workpiece